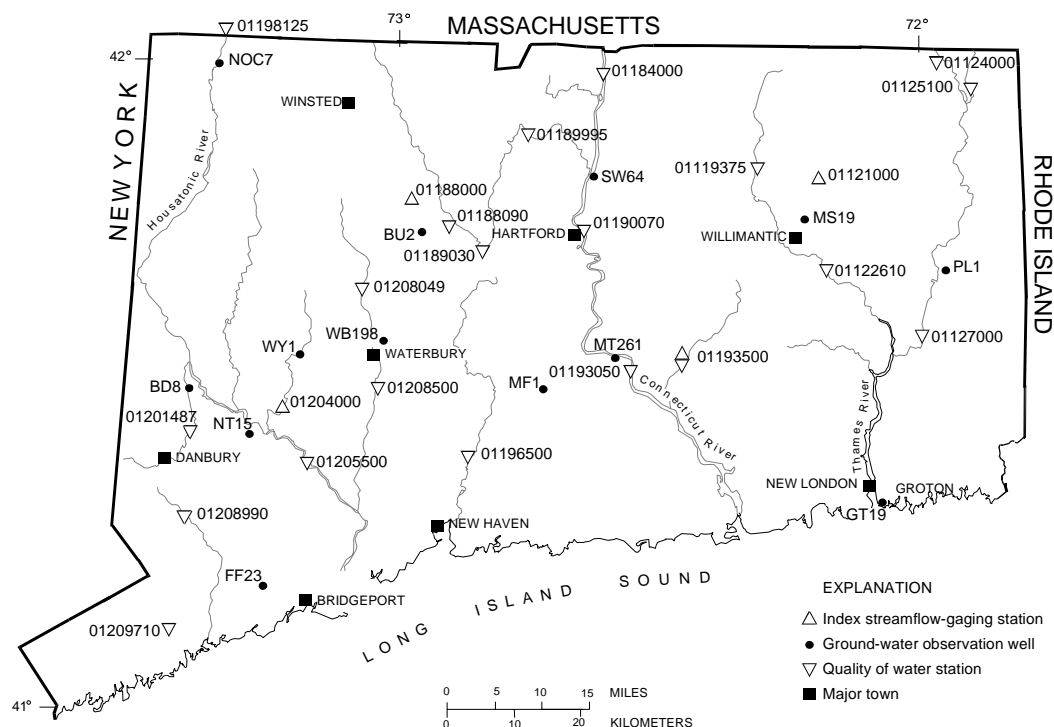


U.S. Department of the Interior
U.S. Geological Survey



WATER-RESOURCES CONDITIONS
IN CONNECTICUT, JULY 1999

The USGS provides maps, reports, and information to help others manage, develop, and protect America's water, energy, mineral, land, and biological resources.



DATA-COLLECTION SITES USED IN THIS REPORT

This report contains a small part of the ground-water, surface-water, and water-quality data collected by the USGS at sites in Connecticut. More complete information may be found in the annual Water-Data Report. Data for this report were collected by the USGS in cooperation with the Connecticut Dept. of Environmental Protection.

For more information on USGS programs in Connecticut, please contact Virginia de Lima (District Chief); 101 Pitkin St., East Hartford, CT 06108; **phone (860) 291-6740**; fax (860) 291-6799; dc_ct@usgs.gov

Additional earth science information, including this document, is on the USGS Home Page on the World Wide Web at <http://www.usgs.gov> or the Connecticut District home page at <http://conn.er.usgs.gov>. For more information on all USGS reports and products (including maps, images, and computerized data), call **1-888-ASK-USGS**.

INDEX TO INFORMATION

| | | | |
|--------------|---|---------------|---|
| Data Sites | 1 | Reservoirs | 5 |
| Ground Water | 2 | Water Quality | 6 |
| Streamflow | 4 | | |

GROUND-WATER LEVELS

Ground-water levels during July decreased in all wells. All wells were in the below-normal range, except for MT-261 (Middletown) and SW-64 (S. Windsor), which were in the normal range. New records for minimum ground-water levels were established at FF-23 (Fairfield) and GT-19 (Groton).

Ground-water levels are in feet below land surface. Statistics are based on period of record (through calendar year 1998).


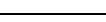

| WELL NUMBER AND TOWN | JULY 1999 GROUND-WATER LEVEL (date measured) | | JUNE 1999 GROUND- WATER LEVEL | JULY 1998 GROUND- WATER LEVEL | JULY MAXIMUM GROUND-WATER LEVEL (year recorded) | | JULY MINIMUM GROUND-WATER LEVEL (year recorded) | | JULY MEDIAN GROUND- WATER LEVEL |
|-------------------------|---|-------|--|--|--|------|--|------|---|
| | | | | | | | | | |
| BD-8 (Brookfield) | 7/29 | 31.35 | 30.21 | 30.45 | 27.55 | 1972 | 32.36 | 1985 | 30.53 |
| BU-2 (Burlington) | 7/26 | 24.62 | 20.42 | 19.17 | 15.08 | 1948 | 25.60 | 1964 | 20.80 |
| FF-23 (Fairfield) | 7/29 | 9.70 | 8.43 | 8.41 | 7.36 | 1983 | 9.70 | 1999 | 8.34 |
| GT-19 (Groton) | 7/25 | dry* | 16.72 | 15.72 | 12.00 | 1972 | dry* | 1999 | 16.10 |
| MF-1 (Middlefield) | 7/27 | 11.98 | 9.40 | 9.72 | 6.85 | 1948 | 13.05 | 1965 | 10.57 |
| MS-19 (Mansfield) | 7/26 | 12.70 | 11.88 | 12.11 | 9.77 | 1972 | 13.25 | 1965 | 11.91 |
| MT-261 (Middletown) | 7/27 | 21.94 | 20.88 | 20.33 | 20.24 | 1972 | 23.11 | 1994 | 21.57 |
| NOC-7 (North Canaan) | 7/30 | 10.30 | 9.80 | 9.76 | 9.04 | 1975 | 10.50 | 1995 | 9.82 |
| NT-15 (Newtown) | 7/29 | 8.97 | 7.40 | 6.00 | 3.17 | 1972 | 9.50 | 1995 | 7.46 |
| PL-1 (Plainfield) | 7/28 | 30.95 | 30.60 | 28.65 | 28.60 | 1989 | 32.38 | 1991 | 30.58 |
| SW-64 (S. Windsor) | 7/26 | 12.37 | 11.66 | 10.21 | 9.29 | 1972 | 14.61 | 1966 | 11.83 |
| WB-198 (Waterbury) | 7/29 | 17.81 | 16.65 | 14.55 | 11.60 | 1972 | 18.95 | 1985 | 14.99 |
| WY-1 (Woodbury) | 7/29 | 27.87 | 25.16 | 22.77 | 21.60 | 1968 | 29.34 | 1962 | 24.73 |

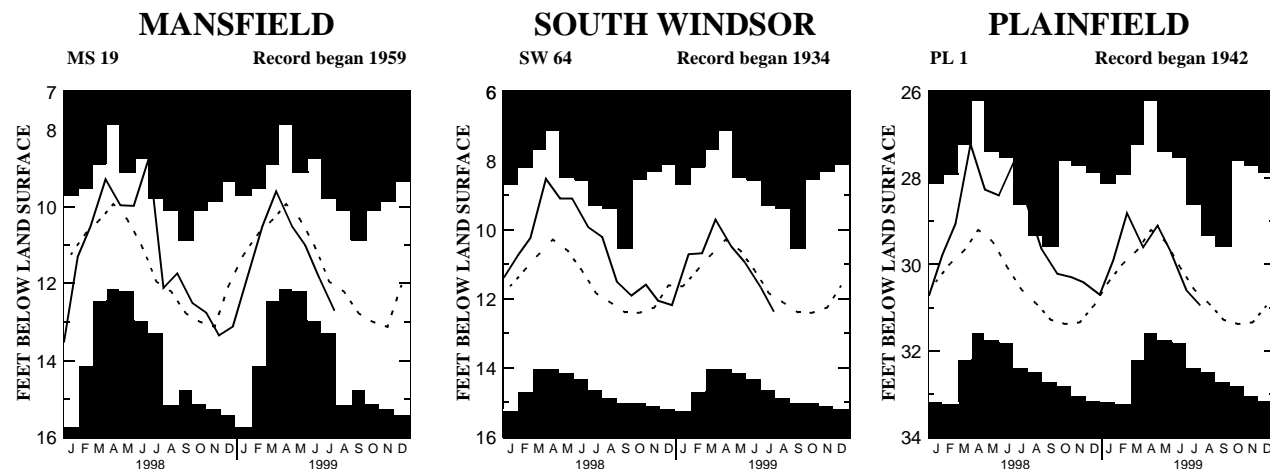
*18.18 is the measured length of the well in Groton.

(Ground-water level data collected by USGS personnel and individual observers.)

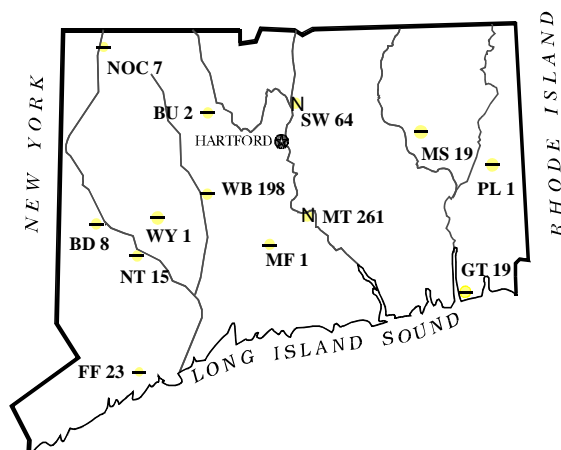
GROUND-WATER LEVELS (CONTINUED)

(Status of ground-water storage as indicated by the water level changes in observation wells, as shown on hydrographs)

-  Shaded area on graphs show highest and lowest water levels of record through calendar year 1998.
-  Solid line shows current water levels.
-  Dashed line is monthly median for period of record through calendar year 1998.



MASSACHUSETTS



ABOVE NORMAL

Within the highest 25% of record for this month.



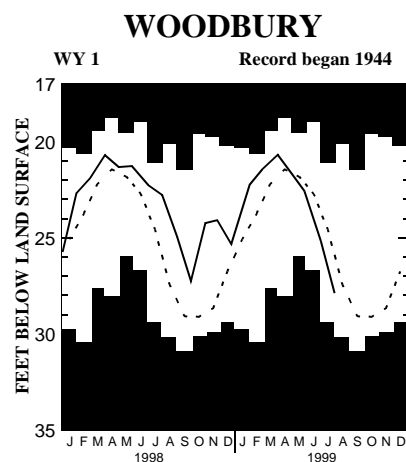
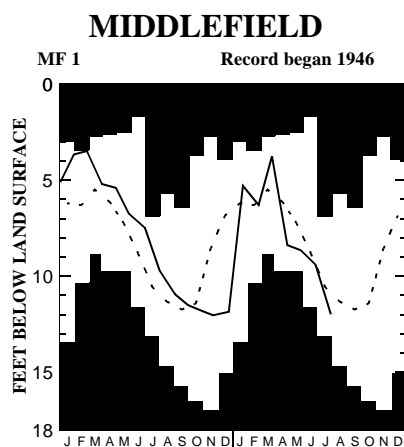
NORMAL RANGE

Between the highest and lowest 25% of record for this month.



BELOW NORMAL

Within the lowest 25% of record for this month.



STREAMFLOW (measured in cubic feet per second) → PROVISIONAL DATA ←

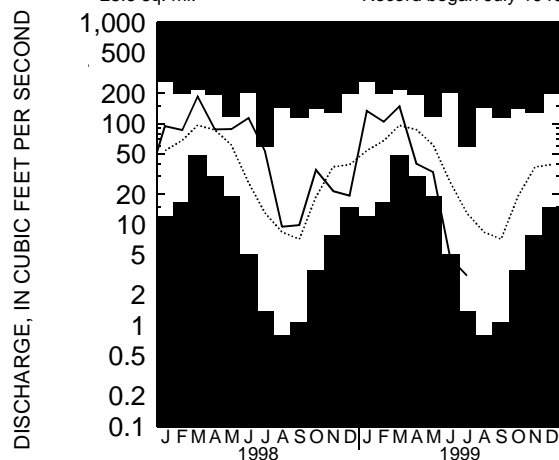
Streamflows in July were in the below-normal range for the entire State. Mount Hope River (NE Connecticut) remained in the below-normal range for the fourth consecutive month. Burlington Brook (NW Connecticut) remained in the below-normal range for the second consecutive month. Salmon River (SE Connecticut) remained in the below-normal range for the fourth consecutive month. Pomperaug River (SW Connecticut) remained in the below-normal range for the second consecutive month. Across the State, mean streamflow for July averaged 34 percent of the July long-term median value.

| USGS STREAMFLOW-GAGING STATION NAME AND NUMBER | JULY 1999 MEAN | JUNE 1999 MEAN | JULY 1998 MEAN | JULY MAXIMUM VALUE (year recorded) | | JULY MINIMUM VALUE (year recorded) | | JULY MEDIAN (1961-90) |
|---|----------------------|----------------------|----------------------|--|------|--|------|-----------------------------|
| MT HOPE RIVER (01121000) | 3.12 | 4.66 | 53.2 | 60.4 | 1972 | 1.35 | 1957 | 13.0 |
| BURLINGTON (01188000) | 0.86 | 1.57 | 6.34 | 15.2 | 1938 | 0.80 | 1966 | 3.03 |
| SALMON RIVER (01193500) | 23.8 | 29.7 | 148 | 426 | 1938 | 8.41 | 1957 | 46.8 |
| POMPERAUG (01204000) | 11.9 | 30.5 | 108 | 272 | 1938 | 9.56 | 1957 | 34.9 |

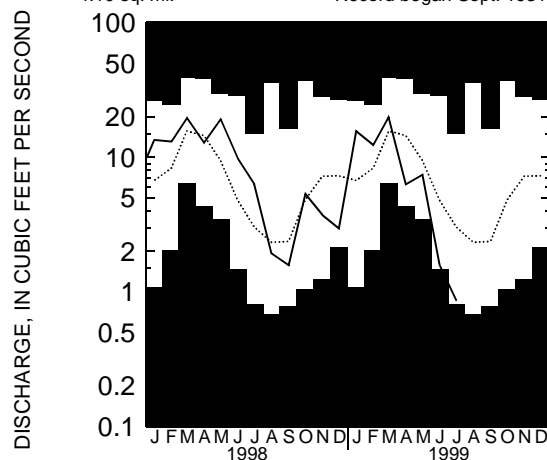
MONTHLY MEAN RUNOFF AT FOUR INDEX STATIONS

Shaded areas on graphs show highest and lowest monthly mean discharge of record.
 — Current record Median (1961-1990)

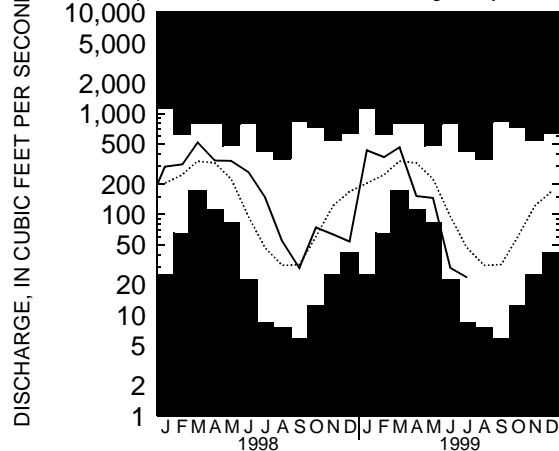
MOUNT HOPE RIVER NEAR WARRENVILLE
 28.6 sq. mi. Record began July 1940



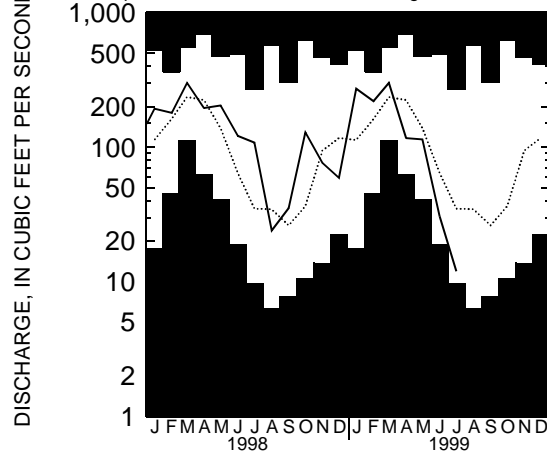
BURLINGTON BROOK NEAR BURLINGTON
 4.10 sq. mi. Record began Sept. 1931

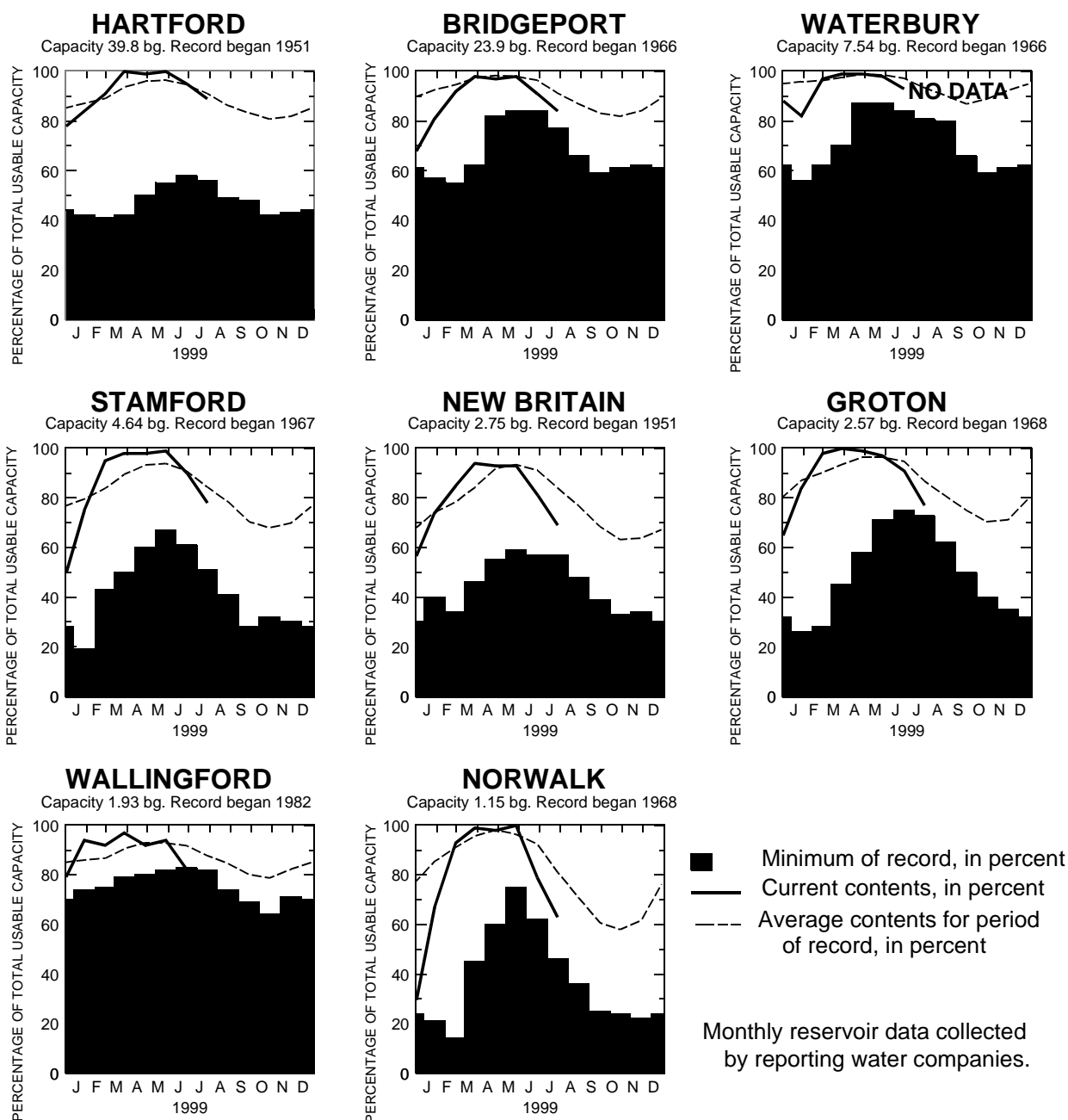


SALMON RIVER NEAR EAST HAMPTON
 100 sq. mi. Record began July 1928



POMPERAUG RIVER AT SOUTHBURY
 75.1 sq. mi. Record began June 1932



RESERVOIRS (Contents in billion gallons)

| RESERVOIR SYSTEM (usable capacity, in billion gallons) | JUNE CAPACITY (PERCENT) | JULY CAPACITY (PERCENT) | LONG-TERM AVERAGE CAPACITY FOR JULY (PERCENT) |
|---|----------------------------|----------------------------|---|
| Hartford (39.8 bg) | 95 | 89 | 91 |
| Bridgeport (23.9 bg) | 91 | 84 | 91 |
| Waterbury (7.54bg) | 93 | not available | 93 |
| Stamford (4.64 bg) | 90 | 78 | 84 |
| New Britain (2.75 bg) | 81 | 69 | 84 |
| Groton (2.57 bg) | 91 | 77 | 87 |
| Wallingford (1.93 bg) | 82 | 80 | 88 |
| Norwalk (1.15 bg) | 79 | 63 | 81 |

**U.S. Department of the Interior
U.S. Geological Survey
Water Resources Division
101 Pitkin St.,
E. Hartford, Connecticut 06108**

CHEMICAL, PHYSICAL, AND BACTERIOLOGICAL QUALITY OF SELECTED STREAMS IN CONNECTICUT

[Station locations shown on front page; --, not applicable; **streamflow** measured in instantaneous cubic feet per second; **% flow duration** is that flow that was equaled or exceeded more than "X" percent of the time from 1961-90; **bacteriological analysis** reconnaissance data enumerated using membrane filter method with immediate incubation; **col/100 mL**, colonies per 100 milliliters; **K**, results based on colony count outside the acceptable range (non-ideal colony count)]

| USGS WATER-QUALITY STATION NAME AND NUMBER | SAMPLE DATE IN 1999 | STREAMFLOW/ % FLOW DURATION | SPECIFIC CONDUCTANCE (in $\mu\text{S}/\text{cm}$ at 25°C) | WATER TEMPERATURE (°C) | DISSOLVED OXYGEN CONCENTRATION (mg/L) %SATURATION | FIELD PH | FECAL COLIFORM (COL/100 mL) | ENTEROCOCCI (COL/100 mL) |
|---|-----------------------------|-----------------------------------|---|------------------------------|---|----------|-----------------------------------|-----------------------------|
| 01119375 Willimantic R. at Merrow | 7/28 | 17.6/-- | 192 | 26.5 | 8.4/108 | 7.82 | 108 | 38 |
| 01122610 Shetucket R. at South Windham | 7/26 | 80/96 | 146 | 26.0 | 9.3/116 | 7.51 | 144 | 15K |
| 01124000 Quinebaug R. at Quinebaug | 7/8 | 25.4/96 | 240 | 26.0 | 7.7/97 | 7.48 | 156 | 124 |
| 01125100 French R. at North Grosvenordale | 7/8 | 17.5/-- | 293 | 27.0 | 9.5/122 | 9.72 | 70 | 72K |
| 01127000 Quinebaug R. at Jewett City | 7/26 | 105/98 | 190 | 26.0 | 5.5/69 | 7.59 | 140 | 10K |
| 01184000 Connecticut R. at Thompsonville | 7/13 | 6300/78 | 148 | 25.5 | 8.1/98 | 7.45 | 38 | 46 |
| 01188090 Farmington R. at Unionville | 7/29 | 285/79 | 87 | 20.5 | 9.3/104 | 7.50 | 106 | 15K |
| 01189030 Pequabuck R. at Farmington | 7/29 | 30/-- | 412 | 23.0 | 8.6/102 | 7.54 | 128 | 48 |
| 01189995 Farmington R. at Tariffville | 7/7 | 620/69 | 118 | 25.0 | 7.3/89 | 7.25 | 196 | 64 |
| 01190070 Connecticut R. at Hartford | SITE NOT SAMPLED THIS MONTH | | | | | | | |
| 01193050 Connecticut R. at Middle Haddam | SITE NOT SAMPLED THIS MONTH | | | | | | | |
| 01193500 Salmon R. near East Hampton | 7/19 | 21.3/89 | 102 | 26.0 | 8.0/100 | 7.26 | 1040 | 118 |
| 01196500 Quinnipiac R. at Wallingford | 7/6 | 55/93 | 359 | 27.0 | 6.3/80 | 7.59 | 900K | 212 |
| 01198125 Housatonic R. near Ashley Falls, MA | 7/15 | 275/-- | 351 | 21.0 | 9.9/114 | 8.55 | 94 | 40 |
| 01201487 Still R. at Rt. 7 at Brookfield Center | 7/22 | 16.5/-- | 620 | 22.5 | 7.5/88 | 7.74 | 1280K | 680 |
| 01205500 Housatonic R. at Stevenson | 7/22 | 114/92 | 273 | 24.0 | 6.1/73 | 7.76 | 8K | 1K |
| 01208049 Naugatuck R. near Waterville | 7/14 | 21/-- | 347 | 24.0 | 8.6/102 | 7.60 | 52 | 22K |
| 01208500 Naugatuck R. at Beacon Falls | 7/14 | 84/96 | 610 | 23.0 | 7.3/85 | 7.26 | 860 | 32 |
| 01208990 Saugatuck R. near Redding | 7/27 | 0.5/97 | 242 | 25.5 | 8.0/100 | 7.70 | 136 | 32 |
| 01209710 Norwalk R. near Winnipauk | 7/27 | 3.7/-- | 328 | 27.5 | 11.4/146 | 8.81 | 184 | 15K |

PROVISIONAL DATA